

FEDERAL BUREAU OF INVESTIGATION

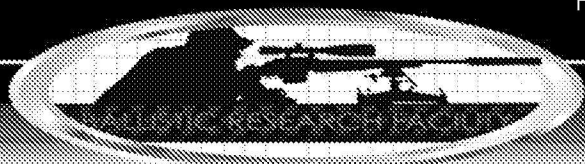


Michigan State Police Sig Sauer M18 Evaluation

TECHNICAL EVALUATION RESULTS

DISTRIBUTION NOT AUTHORIZED WITHOUT WRITTEN APPROVAL FROM
THE BALLISTIC RESEARCH FACILITY

30 AUGUST 2024



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I. INTRODUCTION

The Ballistic Research Facility (BRF) is the FBI's sole research, development, testing & evaluation (RDT&E) facility for weapons, ammunition, armor, and other law enforcement items. The facility was created in March 1988 as a direct result of the April 11, 1986 gunfight in which Special Agents Jerry Dove and Ben Grogan were killed. Following this event, the FBI determined independent research was required to document and explain wounding methods of small arms projectiles; and a scientifically repeatable test method was needed to evaluate ammunition. Ultimately, the industry standard for small arms ammunition was created and became known as the "FBI Protocols".

BRF supports domestic and international law enforcement agencies by providing ballistic test data; training in terminal ballistics; and assisting with department research and testing efforts¹.

BRF is led by a Unit Chief who serves as the Director of Research and is comprised of Supervisory Special Agents and Ballisticians. Additionally, BRF has a full-time representative from both the Drug Enforcement Administration and the United States Marshal's Service on staff.

II. BACKGROUND

The Michigan State Police (MSP) began transitioning all members from the current Glock pistols issued by the department to the Sig Sauer M18 in or about April 2024. The transition process included issuing the appropriate equipment, training each member through a 1,200 round course of fire, and qualifying each member using the departments official pistol qualification course.

On or about July 31, 2024 a MSP motor officer was standing in a squad area with other members when his department issued Sig Sauer M18² fired uncommanded. The firearm was properly secured in the department issued Alien Gear Rapid Force Level 3 holster at the time of the detonation. According to the member's statement and the statements of others at no time was the trigger pressed, intentionally or inadvertently³. The member did have objects in his hands at the time of the event, including his keys.

The subject firearm, while in the holster, was removed from the members leg and placed in an evidence bag pending further evaluation.

On or about August 2, 2024 BRF was requested to conduct an evaluation of the subject pistol.

III. SUBJECT FIREARM

The subject firearm was determined to be a Sig Sauer M18 pistol⁴, serial number [REDACTED] with X Flat Blade Trigger. The M18/P320 family of firearms uses a fire control unit compatible with multiple frame sizes and styles offered by Sig Sauer. The fire control unit is a traditional

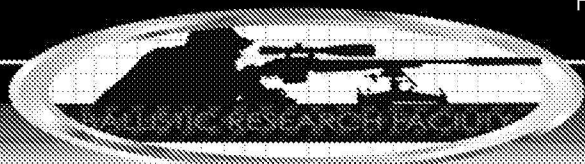
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¹ Agencies can communicate with BRF at [REDACTED] and access BRF data via Justice Connect on the Law Enforcement Enterprise Portal [REDACTED]

² The MSP Sig Sauer M18 is mechanically the same as the commercial Sig Sauer P320.

³ See the MSP investigative file for further details.

⁴ The small grip module was utilized by MSP.



sear design which holds a “partially pre-tensioned striker”⁵ ⁶. Additionally, “the P320 [M18] firing mechanism has designed safety features that prevent the pistol from firing unless the trigger is moved rearward resulting in the de-activation of these safety features. These features include:”⁷

- Striker Safety Lock
- Captive Safety Lever
- Striker Sear Engagement (Primary & Secondary Sear Notch)

The following are photographs of the firearm and holster in there as delivered condition:



Figure 1- As Delivered

⁵ Sig 320 Technical Armorer's Manual

⁶ Because the striker pin hook face is angled the striker moves rearward an additional .010-.014” when the trigger is pressed. However, there is sufficient energy in the striker spring while the striker pin hook is captured in the notch for the weapon to fire without the additional rearward travel.

⁷ Sig 320 Technical Armorer's Manual

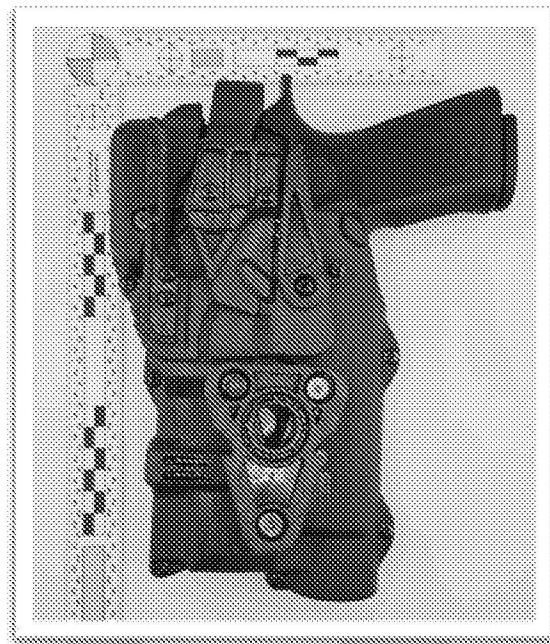
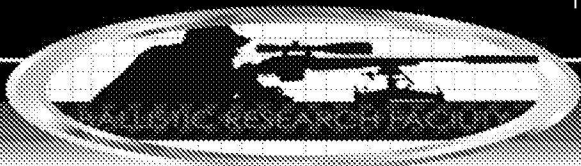


Figure 2- As Delivered

In addition to the firearm and holster, MSP utilizes the Sig Sauer Romeo M17 pistol mounted optic and the Surefire X300 Turbo weapon mounted light.

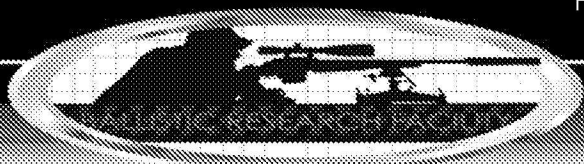
It was estimated that the weapon had been fired 1,300 rounds before the incident took place. The first 1,200 rounds were fired during the transition course and the weapon was cleaned afterward. The remaining 100 rounds were fired during open range time in or about mid-July 2024. The MSP member did not clean the weapon following this training session.

On July 31, 2024 and several minutes prior to the uncommanded firing the MSP member conducted approximately three presentation drills from the holster to practice acquiring the red dot.

The only known "modification" to the weapon (and all MSP weapons) was to the trigger shoe. When MSP took delivery of the weapons from Sig Sauer they experienced "dead" trigger issues. Sig Sauer determined the trigger shoes were out of specification and ground off .0020". The updated trigger shoes were installed by MSP armors trained in the Sig Sauer P320 platform. The only other weapon related issue known as of the date of this report is a broken disconnecter that occurred in the first few hundred rounds on a single firearm during a transition event.

Based on the weapon's design if an "uncommanded" firing occurred two things would be required- a complete⁸ loss of sear engagement and a failure of the striker safety lock.

⁸ Disengagement from the primary sear notch and failure of the secondary notch to catch the striker.



IV. EVALUATION

The evaluation began August 7, 2024 following the transport of the subject firearm, ammunition, and a reference pistol by members of the MSP⁹. Additionally, [REDACTED] Alien Gear participated in the initial evaluation. Sig Sauer, Inc. was requested by MSP to participate in the evaluation but declined.

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The evaluation was conducted to determine if there was any evidence indicating the trigger had been pressed; if the holster may have caused the incident; and to determine the plausibility of the firearm detonating uncommanded.

A. X-Rays:

Prior to any manipulation of the firearm or holster x-rays were taken to determine the condition of the weapon and for any meaningful observations since the firearm had not been altered since the incident. There were no abnormal observations related to the firearm or signs of foreign objects in the holster as seen below¹⁰:

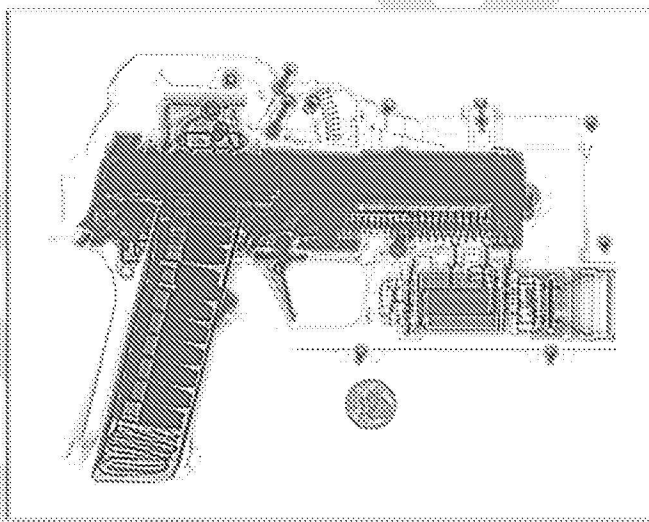
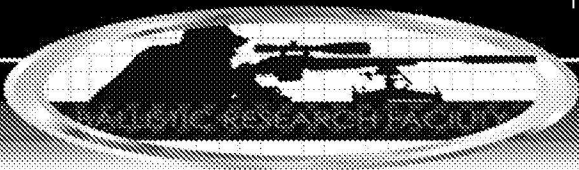


Figure 3- Initial X-Ray

⁹ [REDACTED]

¹⁰ The nickel is placed for scale and located adjacent to the item being x-rayed.

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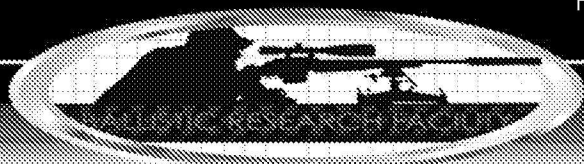
Following the initial x-ray the firearm was removed and photographed:



Figure 4- Firearm Removed



Figure 5- Firearm Removed



To achieve better detail of the firearm additional x-rays were taken and it was observed that the firearm had one fired casing in the chamber and had appeared to reset while in the holster as seen in the below images:

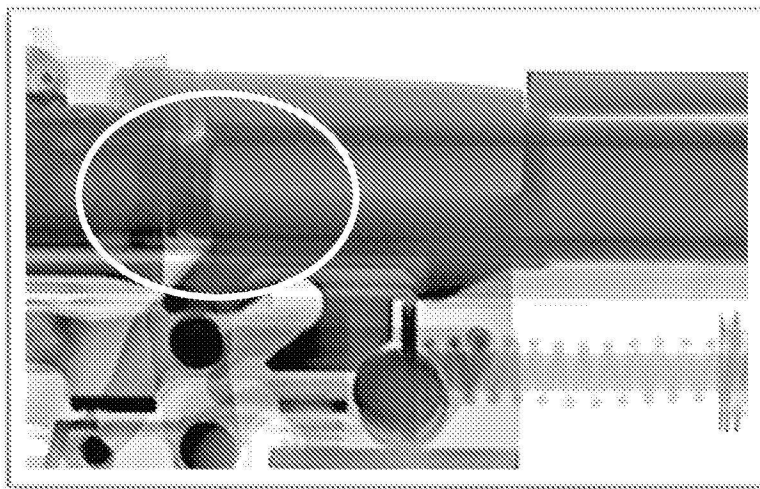


Figure 6- Fired Casing

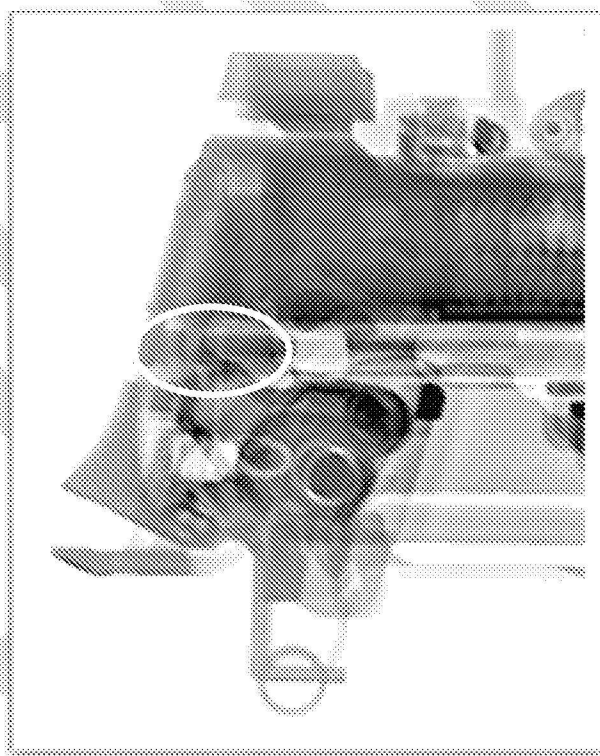


Figure 7- Primary Sear Engagement

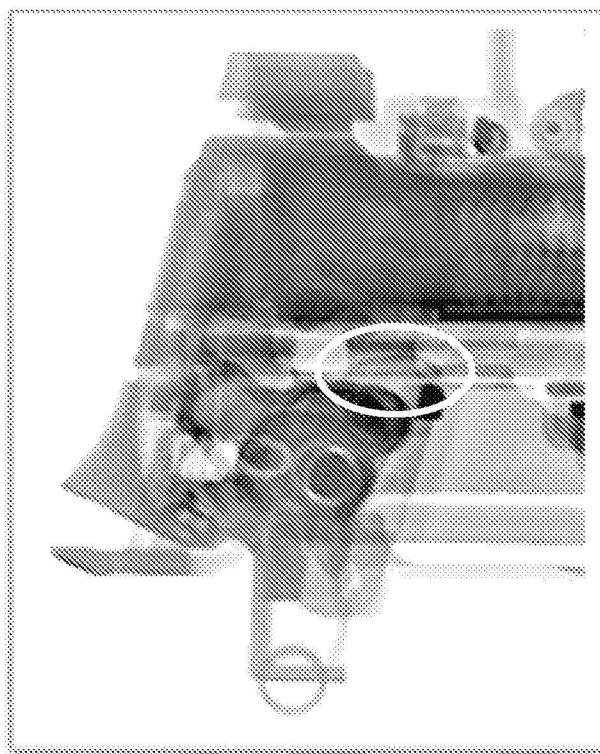
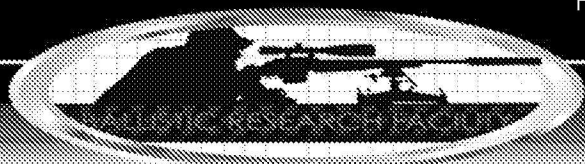
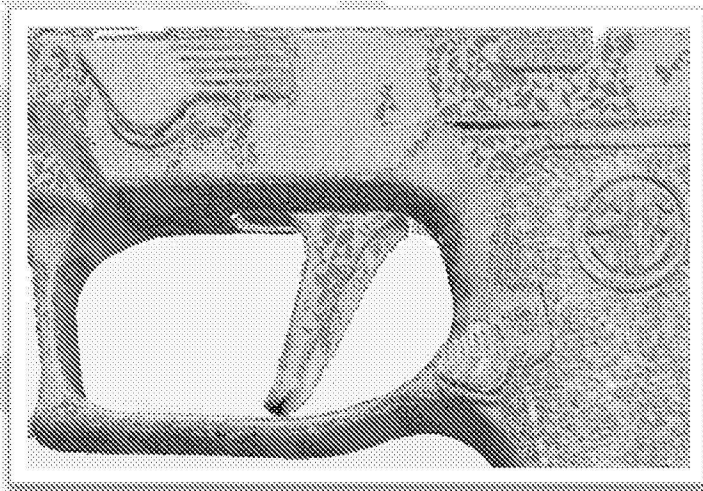
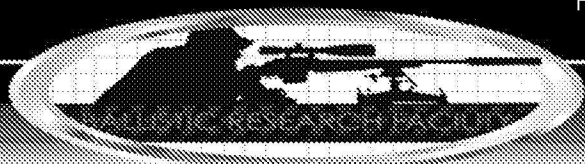


Figure 8- Captive Safety Lever Down

Following the removal of the firearm and to determine if the trigger shoe had completely reset while in the holster, a coordinate measuring machine¹¹ was used to scan the trigger shoe's location prior to conducting a function test of the subject firearm. Following the function test, a second scan was taken and compared to the original scan as seen below:



¹¹ Quantum Max FaroArm Model 21000



The color variance from green to blue indicates between zero and .0025" change between scans- no significant change occurred indicating a full and proper reset of the firearm.

If an abnormal condition was present in the firearm at the time of the uncommanded firing it was no longer observable following the complete reset of the weapon in the holster.

Thereafter, trigger pull weights were taken using a Dvorak Instruments Trigger Scan tool and the following pull weights were observed:

Trigger Scans	
Scan	Weight (lbs.)
1	6.74
2	6.64
3	6.79
4	6.52
5	6.77
Average	6.69

B. Weapon & Parts Inspection:

A parts inspection was conducted by two Defensive Systems Unit (DSU) gunsmiths who were certified in the Sig Sauer M18/P320 weapon. The purpose of the inspection was to determine if there were any obvious abnormalities (ie. A burr, excessive wear, etc.). The following parts were inspected and compared to the equivalent part from a brand-new Sig Sauer M18 pistol¹² supplied by MSP. The parts inspected include, but were not limited to the following¹³:

- Striker
 - o Striker Pin
 - o Striker Safety Lock Notch
- Striker Safety Lock
- Striker Safety Lock Spring
- Sear
 - o Primary Sear Notch
 - o Secondary Sear Notch
- Sear Pin
- Sear Springs
- Captive Safety Lever
- Captive Safety Lever Pin
- Trigger Bar

The initial observations of these parts without magnification showed little observable information. However, there were a few items worth noting and further inspection.

¹² Serial Number

¹³ Additional parts inspections were conducted by BRF staff throughout the evaluation.



The striker safety lock spring is used to hold the striker safety lock in a downward position until acted upon by the captive safety lever. The striker safety lock is intended to prevent the striker from impacting a chambered cartridge in the event sear engagement (primary or secondary) is lost. It was observed that the spring was not fully seated on its post as seen in the below photograph:

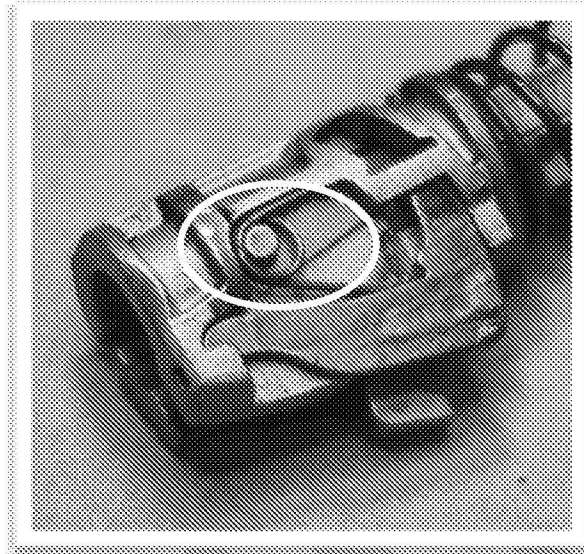


Figure 9- Striker Safety Lock Spring Position

It was also observed that the striker safety lock spring was only captured at the top of the striker housing. A pre-upgrade Sig Sauer P320 striker safety lock was reviewed for comparison and it was observed that both the top and bottom of the striker safety lock spring was captured¹⁴. If the striker safety lock spring leg lost engagement with the top of the striker safety lock, the lock would no longer be spring loaded and could possibly seize or "free-float" rendering the striker safety lock inoperable.

Additionally, the wear on the sear appeared to be off-center and both the primary and secondary sear notch edges appeared worn as shown in the photograph below:

¹⁴ Per the Sig 320 Technical Armorer's Manual the current production does not have a slot for the safety lock spring leg.

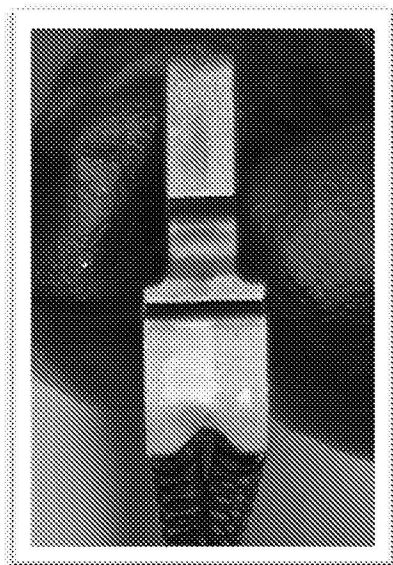
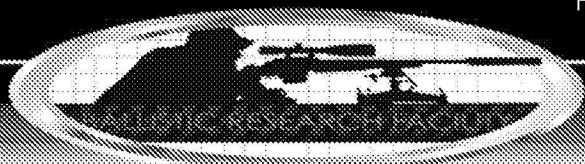


Figure 10- Sear Wear

The striker pin hook was examined due to its relationship to the sear during normal function. It was observed that the bottom of the striker pin hook face that engages with the sear had a "ledge" rather than being flat. The ledge was large enough that it could be felt by dragging a fingernail across the face of the striker pin hook.

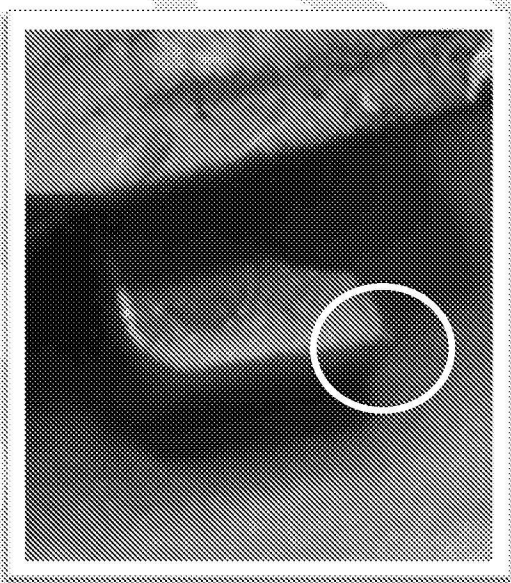


Figure 11- Striker Pin "Ridge"

Lastly, the frame was inspected, and an abrasion was observed on the right-hand side of the weapon on the trigger guard as seen below:

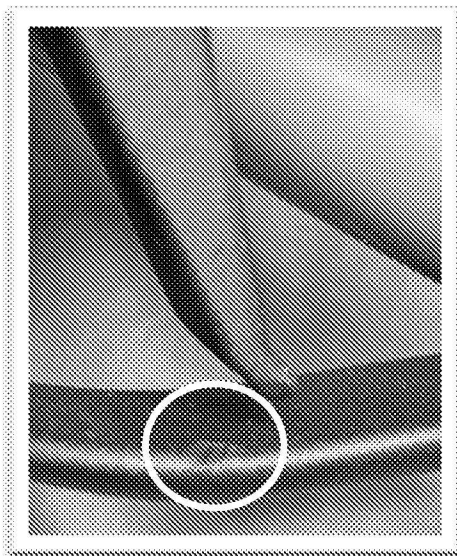
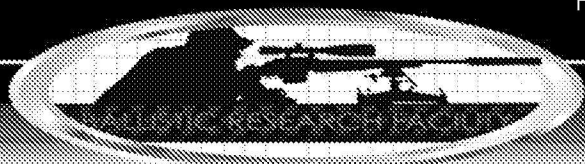


Figure 12- Trigger Guard Abrasion

It was reported by MSP that the member's weapon impacted the ground during the transition program. However, it is unknown if this caused the abrasion.

A Keyence digital microscope¹⁵ was used to further evaluate the parts as shown in the below images:

Striker Safety Lock:

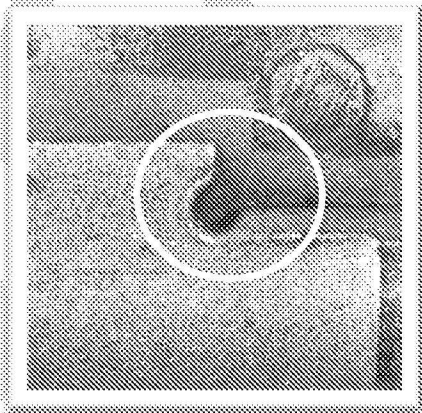


Figure 13- Striker Safety Lock Notch

¹⁵ Model VHX-7000

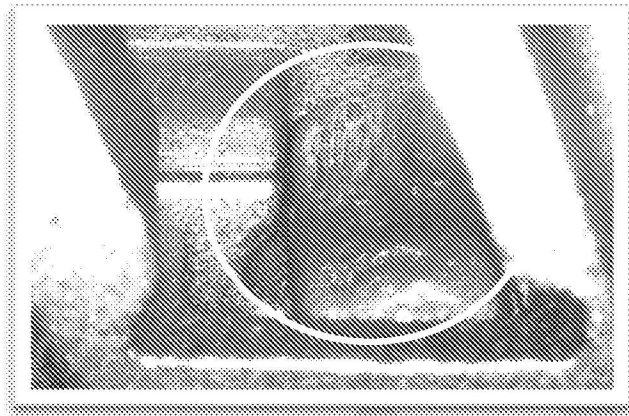


Figure 14- Striker Safety Lock Engaged

Sear:

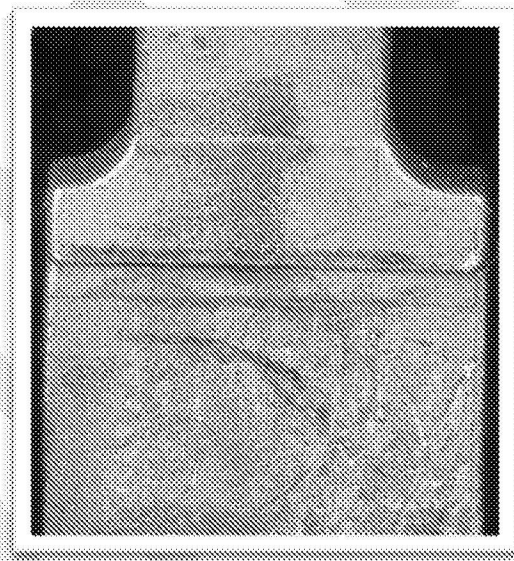


Figure 15- Primary Sear Wear¹⁶

¹⁶ The “scratch” marks on the sear ramp are a result of manually pressing the sear down with a punch.

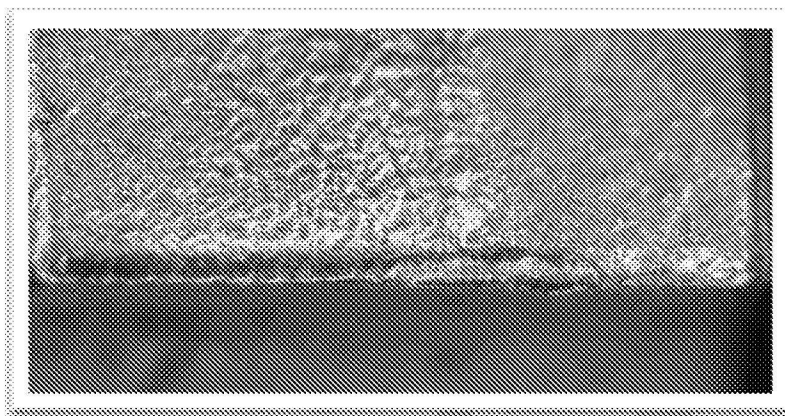
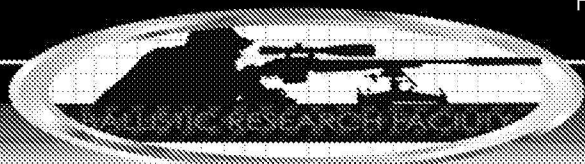


Figure 16- Second Sear Wear

The primary and secondary sear notch edges show wear in line with the striker pin. The face edge of each sear location has a "chipping" appearance. Additionally, there appears to be a manufacturing artifact on the primary sear ramp just in front of the primary sear notch. The primary sear notch holds the striker, which is under spring tension, to the rear until the trigger is pressed. The secondary sear notch is located forward of the primary sear notch and "is designed to capture the striker pin hook in the unlikely event of sear and striker separation without the trigger being pressed."¹⁷ Sig Sauer recommends a replacement schedule of the sear every 20,000 rounds "to prevent equipment failure before it actually occurs".¹⁸

Striker Pin:

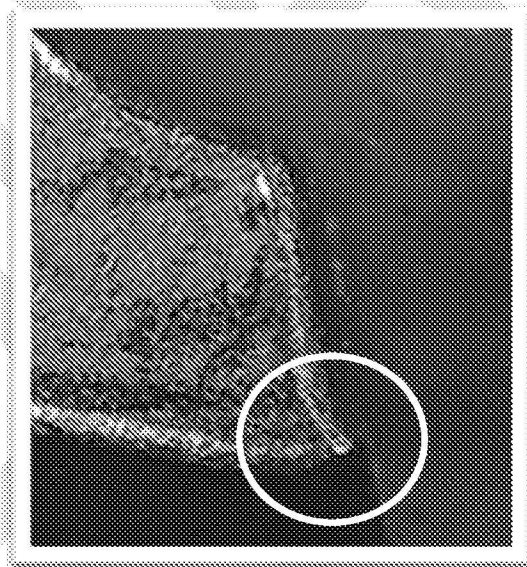


Figure 17- Striker Pin Ledge

¹⁷ Sig P320 Technical Armorer's Manual

¹⁸ Ibid.

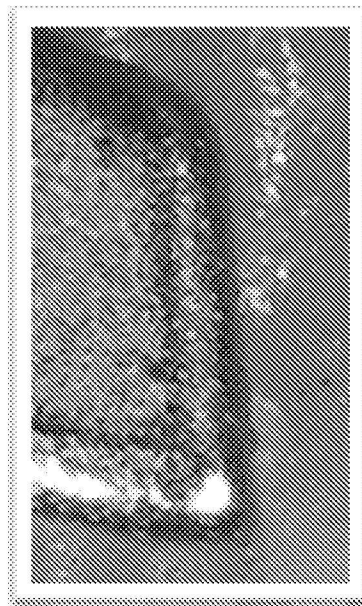
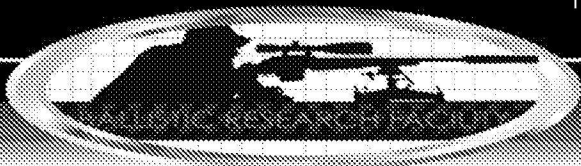


Figure 18- Spare Striker Pin for Comparison

The striker pin hook "ledge" shown in Figure 17 reduces the engagement surface between the primary sear notch and the striker pin face to the "face" of the "ledge". Additionally, the misshapen striker pin hook face may be contributing to excessive wear on the primary and secondary sear notches that is apparently occurring during normal operation.

In addition to the above parts, BRF staff observed movement of the slide downward while the trigger was being pressed rearward on an empty chamber. The amount of movement observed was not familiar to BRF staff so measurements between the slide and frame were obtained by DSU gunsmiths with the weapon in multiple configurations.

With the weapon mounted to a fixture, measurements were taken at the rear and front of the weapon when manipulated by hand or a trigger pull. These measurements were obtained in different configurations and the results were as follows:

Left/Right Movement	
By Hand - Empty Chamber	
Rear	Front
.003"	.005"

Up/Down Movement	
By Hand - Loaded Chamber	
Rear	Front
-0.0045	0.0045

Up/Down Movement	
Trigger Press - Loaded Chamber	
Rear	Front
-0.006	0.003

Up/Down Movement	
Dead Trigger - Loaded Chamber	
Rear	Front
0.004	-0.0015



Additionally, during dry-fire manipulation it was observed that the trigger could be partially pressed to the rear and the slide manipulated by hand causing the striker to fall completely. This was then tested using a primed case and the striker did in fact detonate the primed case indicating the striker safety lock was disabled based on the partial trigger press:

C. Fired Casing Review:

After the function test was completed and prior to the commencement of the parts inspection the fired casing was extracted from the weapon. A Lyman 9mm case gauge was used to verify the spent casing fell within SAAMI specification. Additionally, a digital linear gauge¹⁹ was used to measure the striker indentation on the primer- the indentation measured .025"²⁰.

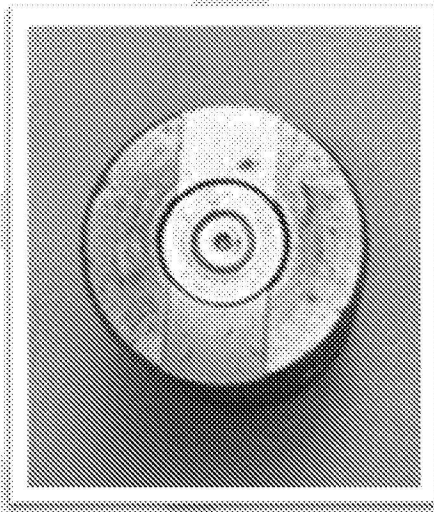


Figure 19- Spent Casing

D. Holster Review:

MSP utilizes a modified Alien Gear Rapid Force Level 3 Duty holster. The holster was modified to reduce the ability for a member to access the trigger while the Sig Sauer M18 was secured in the holster. As shown in Figures 1 and 2 the weapon is properly seated in the holster with all levels of retention in place. While holstered, there is approximately 1/8" of spacing between the weapon's pistol grip and the holster body and approximately 7/16" between the trigger guard and the holster body.

There was no observable damage to the holster as a result of the uncommanded discharge. This is in part due to the open muzzle design of the holster which allows any debris which might fall into the holster to escape. The only observable wear was inside the holster and is a result of the takedown lever contacting a shelf inside the holster as seen below:

¹⁹ Peacock Model PDN25N

²⁰ Generally, BRF considers an indentation of .013" sufficient to cause consistent primer ignition

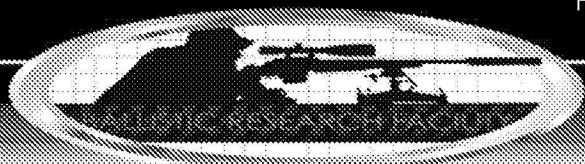


Figure 20- Holster Wear

[REDACTED] Alien Gear evaluated the holster and confirmed the holster was undamaged and in normal working order.

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An attempt was made by BRF staff member²¹ to access the trigger while the weapon was properly holstered. While the staff member was able to force his finger passed the holster and to the trigger it is an improbable event based on the force necessary²².

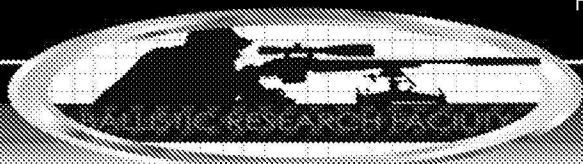
As previously stated, the MSP member was holding objects in his hands when the event occurred, including his keys which are shown below:



Figure 21- MSP Member's Keys

²¹ SSA [REDACTED]

²² There was also noticeable discomfort in the effort and deflection of the skin afterward.



BRF was successful in using keys, both flat and serrated profiles, to press the trigger while the M18 was holstered. The keys were approximately 1.7" and 1.0" respectively. The trigger could be fully pressed to the rear with the proper friction against the side of the trigger shoe only or using the holster as a fulcrum. During this test it was observed that the keys caused an abrasion on the trigger guard at and near the area of the abrasion seen on the weapon when it arrived (Figure 12).

V. LIVE FIRE TESTING

A. Limited Function Testing:

Following the initial evaluation limited live fire testing²³ was conducted for function and specifically to determine if the striker safety lock spring moved. The striker safety lock spring was fully seated prior to testing by pressing the spring fully against the striker housing. Thereafter, BRF fired 50 rounds using MSP service ammunition. The striker assembly was removed to observe the position of the spring. This process was completed three times.

It was observed on all three iterations the striker safety lock spring moved during firing as seen in representative images below:

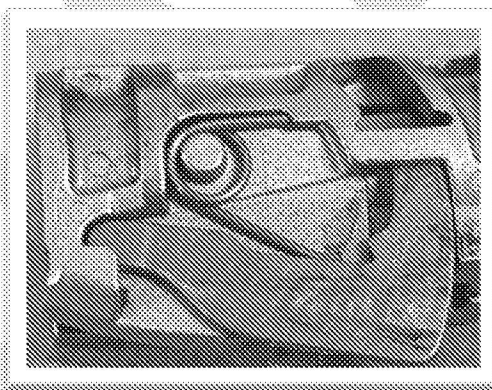


Figure 22- Pre-firing Spring Position

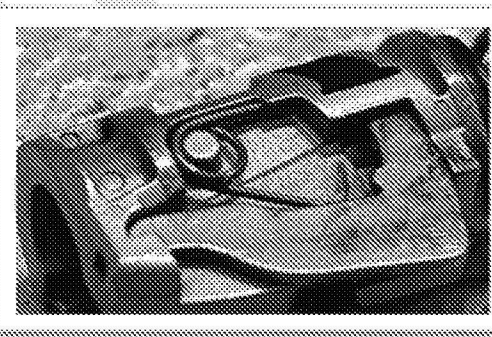


Figure 23- Post Firing Spring Position

²³ Federal Premium Tactical HST 147 grain (P9HST2)



As previously stated, should the spring leg slip off the striker safety lock it may leave the safety inoperable. So long as the space between the striker channel wall and the striker safety lock does not exceed the width of the striker safety lock spring it should remain in place despite not being captured by design.

B. High Speed Video Testing:

To gain a better understanding of the movement of the subject weapon and its components during live fire, test shots were taken utilizing a high-speed camera²⁴. As part of this testing, modifications were made to spare parts and used as necessary. For instance, a rear slide cap was trimmed so that movement of the sear and striker could be observed. Additionally, a spare slide was milled to view movement of the striker safety lock and spring. The remaining parts were original to the subject pistol.

A review of the high speed video resulted in the following observations:

- Slide Catch Lever bounce
- Sear bounce
- Striker Safety Lock & spring movement

Slide Catch Lever Bounce:

During recoil BRF observed the slide catch lever bounce into the slide catch notch. While no malfunctions were observed during this testing [REDACTED]

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[REDACTED]²⁵

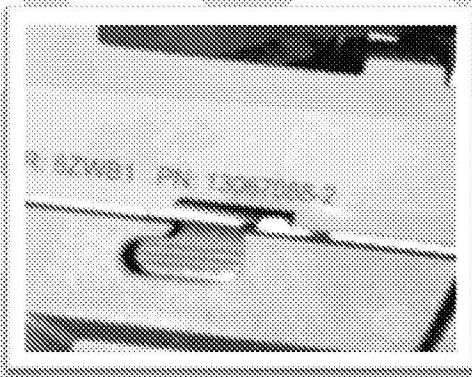


Figure 24- Slide Catch in the down position

²⁴ Phantom TMX7510

²⁵ [REDACTED]

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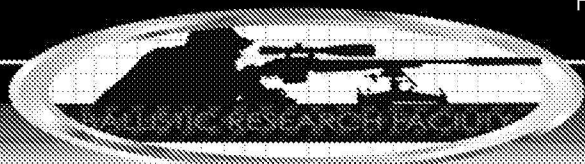


Figure 25- Slide Catch in the up position

Sear Bounce:

Both the sear and sear housing were observed to bounce during recoil. The sear bounced multiple times and impacted the striker pin and bottom of the slide several times during rearward slide travel. It is likely a combination of the forward striker pin movement and striker impacts during recoil that cause wear on the sear surfaces including the "chipping" of the sear face edges.

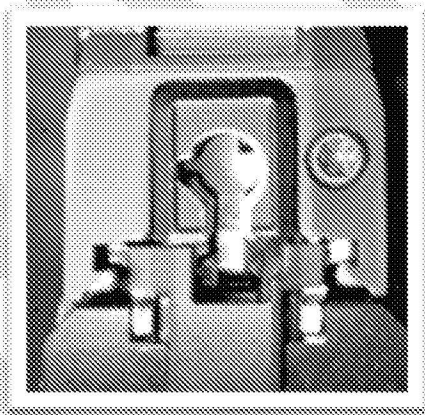


Figure 26 - Sear Released and Down

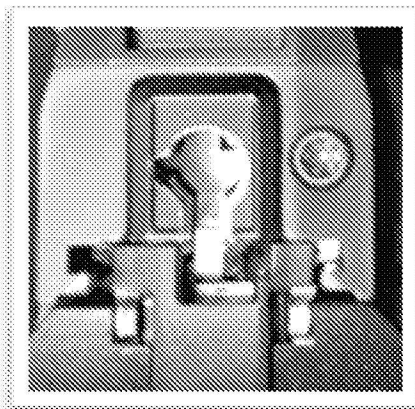
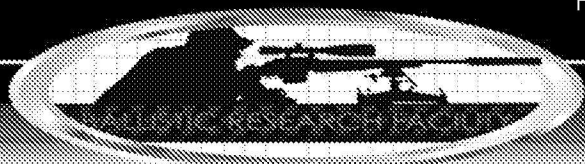


Figure 27 - Sear Up in Bounce #1

Striker Safety Lock & Spring Movement:

As previously mentioned, the striker safety lock spring is responsible for keeping downward pressure on the striker safety lock until the captive safety lever presses the striker safety lock upward allowing the striker to move forward enough to impact the primer. The spring is a single coil two-leg design and as previously stated only captured at the top leg location. During recoil the movement of the striker safety lock and spring were observed.

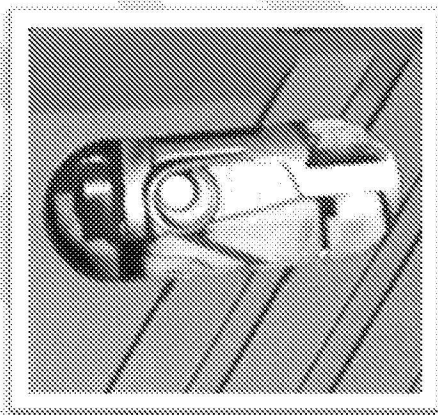


Figure 28 - Striker Safety Lock (down position)

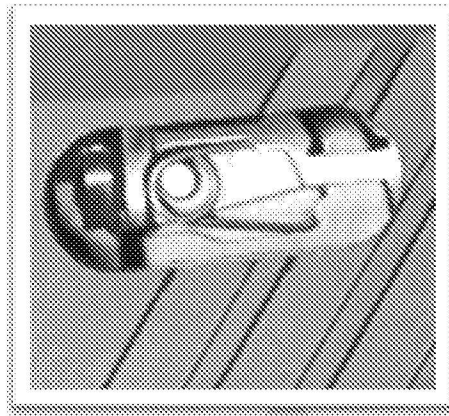


Figure 29 - Striker Safety Lock (up position)

VI. SUPPLEMENTAL TESTING

A. Secondary Sear Notch Test

Because uncommanded firing requires both the loss of sear engagement and the failure of the striker safety lock additional testing of these components was conducted. As previously stated the sear has both a primary and secondary sear notch. The primary notch is used to hold the striker pin hook during normal function of the weapon. The secondary notch is forward and lower of the primary notch. It is designed to catch the striker in the event it loses connection to the primary notch. In addition to other changes to the sear, the secondary notch was added as part of Sig Sauer's Voluntary Upgrade Program²⁶.

To conduct the sear test, milling of the primary sear notch was necessary. Because BRF did not want to alter the subject fire control unit (FCU) a spare FCU was utilized²⁷. The objective was to provide enough engagement between the striker pin hook and the primary sear notch that connection would not be lost until intentionally induced. The inherent issue with changing the sear engagement is the change in timing the secondary sear notch must "catch" the striker pin hook.

Milling the sear²⁸ resulted in less height the secondary sear notch had to travel (increasing the possibility it caught the striker) but it also reduced the spacing between the last point of primary sear contact and the secondary sear notch face (reducing the possibility it caught the striker). As such, the results of the test are limited to the actual test condition and can't reliably be applied to the subject weapon. However, the test does provide insight into design philosophy and function.

²⁶ The voluntary upgrade program began August 8, 2017. The voluntary upgrade program was in response to the risk of "potential discharge of the firearm" when dropped.²⁶ Other changes were made to the striker and trigger, as well as a mechanical disconnect being incorporated. All firearms manufactured after this date contained the updated parts.

²⁷ Serial number [REDACTED]

²⁸ The sear was milled at 45 degree's using a custom fixture created by DSU gunsmiths.

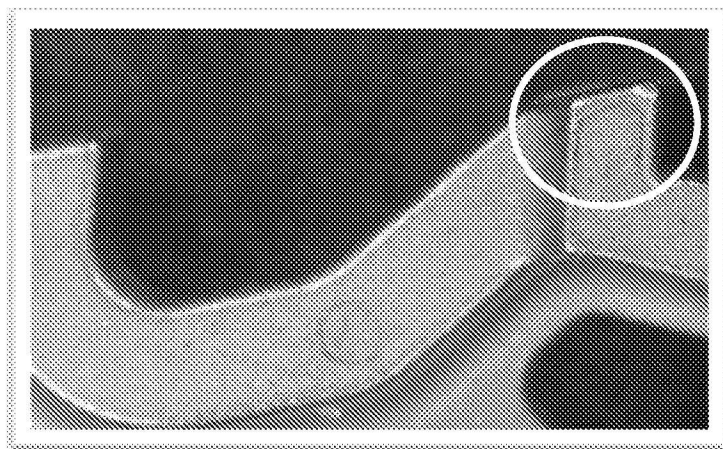
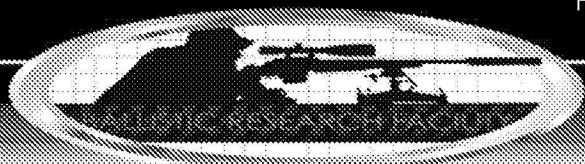


Figure 30 - Pre-milled Sear

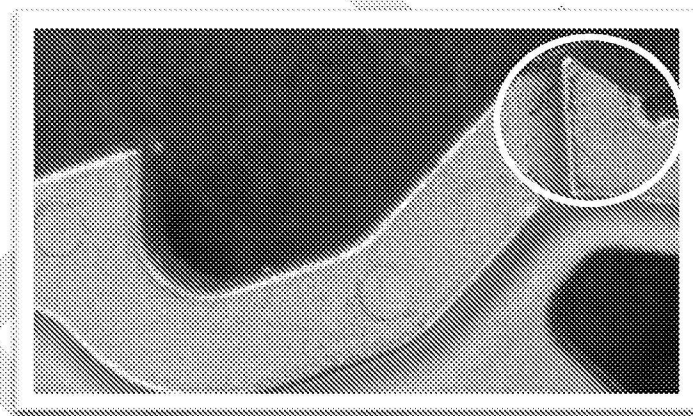


Figure 31 - Post-milled Sear

Once milling was complete the subject FCU was removed and replaced with the FCU containing the altered sear. Additionally, the modified rear slide cap was used to observe the sear. All other components belonged to the subject weapon.

BRF conducted ten tests of the secondary sear in which the striker pin hook was placed on the 45-degree cut primary notch and released the striker by tapping the holstered firearm with a dead blow mallet²⁹. The secondary sear successfully caught the striker pin hook on all ten attempts.

²⁹ Mallet weighed .74lbs

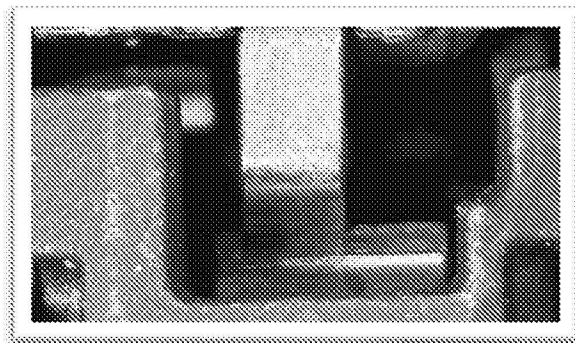
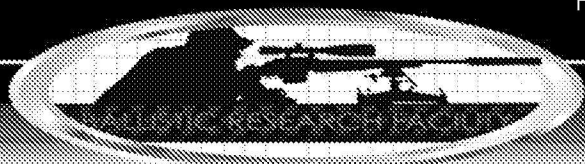


Figure 32 - Striker Hook Placement on Primary Notch

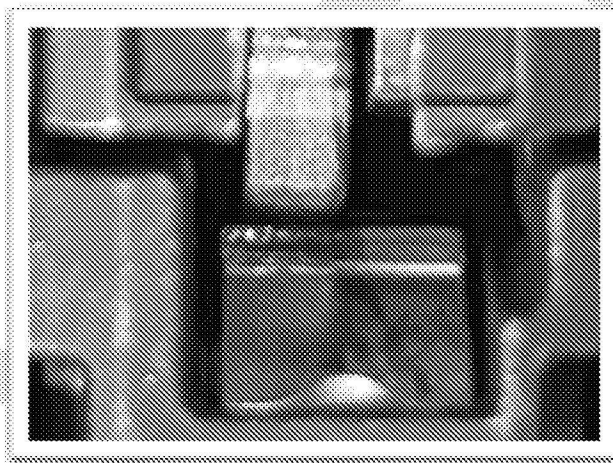


Figure 33 - Secondary Notch Catch of Striker

B. Striker Safety Lock Test:

The striker safety lock is the only "active"³⁰ safety preventing the striker from inadvertently touching the primer and firing a round. It is the last safety with an opportunity to catch the striker should the primary notch lose engagement and the secondary notch be overridden by the striker³¹. As such, additional testing related to the safety's design and function were conducted.

Each test was conducted using the subject weapon and trimmed rear slide cap. The weapon was placed into the subject holster and secured to a table. The optic and slide were left in the open position to access the sear as shown below:

³⁰ Active meaning the safety is disengaged as part of the trigger press. Both the second sear notch and disconnect are not changed as part of the normal firing process.

³¹ 5 Steps Required To Fire a P320 (01/05/2022) by Sig Sauer, Inc.- www.youtube.com/watch?v=pLTP8xp_WU

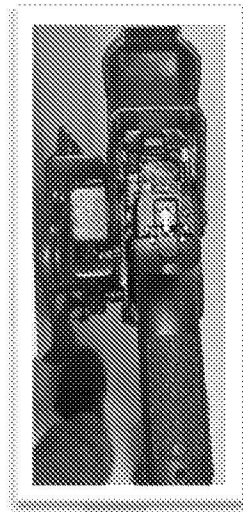


Figure 34 - Test set-up

A primed case was placed into the chamber and a magazine loaded with dummy rounds was inserted. Thereafter, a punch was used to manually disengage the primary sear notch from the striker pin hook³² to fire the primed case, thereby testing the function of the striker safety lock.

The procedure was conducted 100 times at both the primary and secondary sear notch locations. After every 10 attempts the primed case was inspected for primer indentation. Across all attempts at both locations the primed case never detonated nor was there any indication the striker touched the primer in anyway. Therefore, the striker safety lock functioned as designed under these conditions.

A second test with the striker at the primary sear notch location was conducted to test the striker safety lock. The test involved tapping the holstered weapon (on both the holster and weapon) with a dead blow hammer 50 times at multiple locations. After each round of 50 taps the sear was manually disengaged and the primed case was inspected for contact by the striker.

The following locations were struck:

- Holster- Right Side
- Holster- Slide Cover
- Holster- Back Side Top Screw
- Holster- Front
- Holster- Bottom
- Holster- Left Side
- Weapon- Rear Slide Cap
- Weapon- Magazine Floor Plate

³² This method allows for the loss of sear engagement without the expected loss of the striker safety lock and prevents the secondary sear notch from interfering with the test.



- Weapon- Right Side
- Weapon- Left Side
- Weapon- Pistol Grip

The striker safety lock successfully prevented the striker from contacting the primed case after each manual release of the sear. No slip of the sear engagement was observed during the strikes however the striker would shift laterally on the primary sear surface approximately 1/32".

Because of the inherent movement between the slide and frame a third test of the striker safety lock was conducted. Approximately 50 attempts were made to determine if the striker would impact the primed case after manipulating the weapon while holstered. The weapon was pressed together and pulled apart (at the slide and frame). Thereafter, pressure was applied to the frame and the sear manually released from the primary notch. The intent of the manipulation and pressure was to mimic what might occur to a holstered weapon during an officer's duties, such as running, jumping, climbing, fighting, pressing a weapon against a wall or vehicle, or obtaining a master grip on the pistol prior to unholstering, etc.

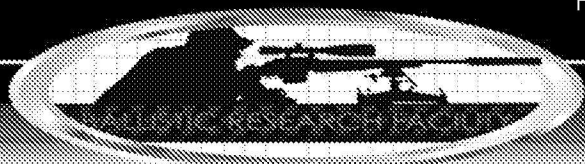
BRF staff observed the primed case fire on nine attempts with the primer indent measuring between .019"-.026" with an average of .023". While staging one attempt to allow another BRF staff member to observe the striker safety lock function as designed, the weapon was prepared and simply placed into the holster with no manipulation. A second staff member released the primary sear notch from the striker and the primed case fired indicating failure of the striker safety lock. The primer indentation measured .018"

BRF also observed six instances where the primer did not fire but a small indentation was present indicating the striker had come in contact with the primer. These indentions measured between .0005"-.001".

The remaining attempts resulted in no firing of the primed case and no evidence that the striker had touched the primer. Ultimately, in these instances the striker safety lock worked as designed.

A brand-new unfired Sig Sauer M18 pistol³³ was obtained from MSP to determine if the test could be repeated on another weapon. On the first attempt the striker safety lock successfully prevented the striker from impacting the primed case. However, on the second attempt the

³³ Serial Number



primed case fired indicating the striker safety lock failed to stop the striker's forward movement. The primer indent measured .023".



Figure 35 - Striker Safety Lock Test (no manipulation)

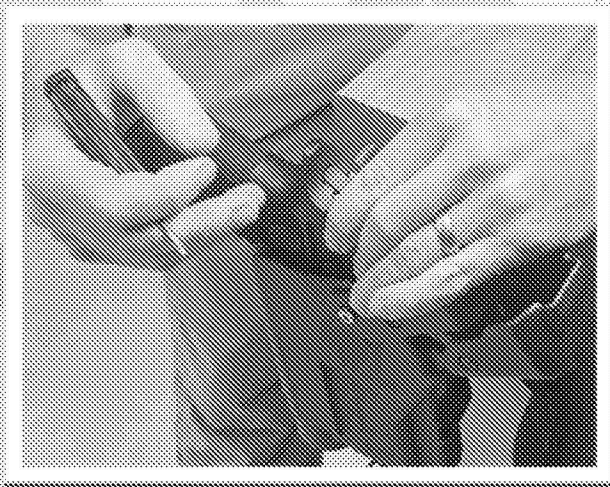


Figure 36 -- Manipulating the Weapon



Figure 37 - Striker Safety Lock Primed Case Fired



Figure 38 - Striker Safety Lock Primed Case Not Fired



VII. CONCLUSION

According to Sig Sauer, Inc. "five independent actions must occur before the P320 will discharge". Those actions are: (1) Trigger bar is pressed to the rear moving the trigger bar forward, (2) Captive safety lever rotates upward, (3) Striker safety lock rotates upward, and (4) Sear rotates downward, and (5) Striker pin is released"³⁴. Should the striker and primary sear notch lose engagement there are two safeties designed to prevent the striker from firing the round in the chamber: (1) Secondary Sear Notch and the (2) Striker Safety Lock.

A reliable test could not be developed at the time of this report to test the effectiveness of the secondary sear notch. However, testing did indicate with movements representing those common to a law enforcement officer it is possible to render the striker safety lock inoperable and ineffective at preventing the striker from impacting a chambered round if complete sear engagement is lost. It is important to note that the striker safety lock by design is the last safety in line to prevent an unintended discharge as it is in place to protect against a secondary sear notch override³⁵.

While examination of the subject weapon did not independently provide evidence of an uncommanded discharge it does indicate that it may be possible if sear engagement is lost. The disabling of the striker safety lock through movement and friction creates a condition which merits further exploration to fully assess potential risk.

BRF recommends that MSP weigh the content of this report with the outcome of the internal investigation in making its final determination.

-- End --

Authored by
Reviewed by:

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³⁴5 Steps Required To Fire a P320 (01/05/2022) by Sig Sauer, Inc.- www.youtube.com/watch?v=pLtTP8xp_WU

³⁵ Ibid.